

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COMMON MULTIPLE CONNECTOR, ITEM 330 ----- SV778872-26 (1)	2/2	330FM14  Electrical open, EMU voltage sense line.  Failure, broken or defective wire, faulty connection.	END ITEM: Airlock power supply will shut down.  GFE INTERFACE: Unable to power EMU through SCU vehicle interface.  MISSION: Loss of use of one EMU.  CREW/VEHICLE: None.  TIME TO EFFECT /ACTIONS: Seconds. Discontinue use of EMU.  TIME AVAILABLE: N/A  TIME REQUIRED: N/A  REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - The leadwires to the J1 connector are strain relieved at the connector by having the wire insulation extend into the connector body. This prevents breakage due to handling and environmental load fatigue. The DCM half electrical connector floats and is guided into proper alignment with the SCU half prior to electrical connector pin and socket engagement. The float of DCM half electrical connector provides proper alignment under all tolerance conditions and helps to minimize engagement force. Lead wire connections to the DCM half electrical connector are crimped per SVHS4909 Type II to insure reliability.  B. Test - Inprocess Test - Continuity testing between J1-12 and J1-13 is performed per operation 130 of the DCM External Wiring Assembly (SV774161-1) Operation Sheets. Resistance specification is 0.160 ohm maximum.  Component Acceptance Test - Not applicable.  PDA Test - Not Applicable.  Certification Test - Certified for a useful life of 15 years.  C. Inspection - The DCM External Wiring Assembly is visually inspected at final inspection per Operation 170. Before a DCM electrical connector pin crimp joint can be made, the electronics technician must produce 5 crimp samples that have a minimum tensile strength of 6 lbs. (per SVHS4909 Type II).  D. Failure History - None.  E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, V1103.02 Orbiter Checkout. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing.  F. Operational Use - Crew Response - PreEVA/PostEVA: Troubleshoot problem, if no success continue EVA operations. Deactivate airlock power supply, operate EMU on battery power, perform battery swap as required. Training - Standard EMU training covers this failure mode. Operational Considerations - EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Flight rules define go/no go criteria related to SCU power.

EXTRAVEHICULAR MOBILITY UNIT  
SYSTEMS SAFETY REVIEW PANEL REVIEW  
FOR THE  
I-330 COMMON MULTIPLE CONNECTOR  
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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